

Claims:

- Sub 12
1. An electronic drinking mug comprising:
 - a heating element in thermal communication with said mug for heating a liquid contained in said mug;
 - a temperature sensor in communication with said heating element for monitoring a temperature of said liquid;
 - a controller in communication with said heating element for selectively activating and deactivating said heating element so as to heat said liquid in said mug to a desired temperature, wherein said controller receives temperature signals from said temperature sensor and deactivates said heating element when the monitored temperature of said liquid is greater than or equal to the desired temperature of said liquid; and
 - a user interface attached to said mug and being in communication with said controller for establishing the desired temperature of said liquid.
 2. The electronic drinking mug as claimed in claim 1, wherein said user interface includes a visual display in communication with said controller for displaying the monitored temperature or the established desired temperature of said liquid
 3. The electronic drinking mug as claimed in claim 2, wherein said visual display includes a liquid crystal display (LCD).
 4. The electronic drinking mug as claimed in claim 2, wherein said visual display includes a LED panel having a series of light emitting diodes, each said light emitting diode being associated with liquid temperature levels selected from the group consisting of room temperature, lukewarm, hot, and very hot.
 5. The electronic drinking mug as claimed in claim 1, further comprising a thermostat in communication with said heating element for regulating a temperature of said heating element.
 6. The electronic drinking mug as claimed in claim 1, further comprising a sound generating element in signal receiving

relation with said controller for selectively generating an audible sound.

7. The electronic drinking mug as claimed in claim 6, wherein said sound generating element generates the audible sound when the monitored temperature is greater than or equal to the desired temperature.

8. The electronic drinking mug as claimed in claim 1, wherein said controller includes a logic subroutine that deactivates said heating element when the monitored temperature is greater than or equal to said desired temperature and reactivates said heating element when the monitored temperature falls at least 2°F below the desired temperature.

9. The electronic drinking mug as claimed in claim 1, further comprising an electrical connector accessible at an exterior surface of said mug for providing electrical power to said controller and said heating element.

10. The electronic drinking mug as claimed in claim 1, wherein said controller has an overheat protection logic stored therein, wherein said controller deactivates said heating element when the monitored temperature is greater than a predetermined overheat temperature.

11. The electronic drinking mug as claimed in claim 10, wherein said controller activates a visual or audible indicator when the monitored temperature is greater than the predetermined overheat temperature.

12. The electronic drinking mug as claimed in claim 11, wherein said audible indicator includes an electronic buzzer.

13. The electronic drinking mug as claimed in claim 1, wherein said mug includes an outer mug, a removable inner mug insertable in said outer mug, and said heating element disposed between said outer and inner mugs.

14. The electronic drinking mug as claimed in claim 13, further comprising a handle secured to said outer mug.

15. The electronic drinking mug as claimed in claim 1, wherein said mug includes an opening at an upper end thereof and a detachable lid for selectively covering said mug opening.

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16. The electronic drinking mug as claimed in claim 1, further comprising at least one temperature set key in signal sending relation with said controller.

17. The electronic drinking mug as claimed in claim 16, wherein said at least one temperature set key is depressible.

18. The electronic drinking mug as claimed in claim 17, wherein said temperature set key is depressible for activating said mug.

~~SUB 19~~
19. A method of maintaining a liquid at a selected temperature comprising:

providing a drinking mug and a heating element in thermal communication with said mug;

providing a temperature sensor in communication with said heating element for continuously monitoring a temperature of said liquid;

selecting a desired temperature for said liquid; and heating said liquid to said selected temperature.

20. The method as claimed in claim 19, further comprising deactivating said heating element after the heating step when said monitored temperature is greater than or equal to said desired temperature.

21. The method as claimed in claim 20, further comprising reactivating said heating element after the deactivating step when said monitored temperature is less than said desired temperature.

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22. The method as claimed in claim 19, further comprising generating a visual or audible signal when said monitored temperature is greater than or equal to said desired temperature.

23. The method as claimed in claim 19, further comprising providing a controller in communication with said heating element and said temperature sensor, wherein said controller has one or more logic subroutines stored therein for activating said heating

element when the monitored temperature is less than the desired temperature and deactivating said heating element when the monitored temperature is greater than or equal to said desired temperature.

24. The method as claimed in claim 19, further comprising providing a series of light emitting diodes exposed at an exterior surface of said mug for indicating when the monitored temperature of said liquid is at a level associated with room temperature, lukewarm, hot, and very hot.

25. The method as claimed in claim 19, further comprising providing a visual display at the exterior surface of said mug for displaying the monitored temperature or the selected temperature.

26. The method as claimed in claim 19, further comprising providing a thermostat in contact with said heating element for regulating a temperature of said heating element.